EXOTIC PLANT INTRODUCTION IN KANSAS, TWO NEW SPECIES

Iralee Barnard

962 300 Avenue
Hope, Kansas 67451, U.S.A.
findiralee@yahoo.com

ABSTRACT

Described in this paper are two new records for Kansas, *Myagrum perfoliatum* L. (Brassicaceae) and *Lespedeza thunbergii* (DC.) Nakai (Fabaceae), with details about their local introduction and establishment.

RESUMEN

Se aportan dos nuevas citas para Kansas, *Myagrum perfoliatum* L. (Brassicaceae) y *Lespedeza thunbergii* (DC.) Nakai (Fabaceae), con detalles de su introducción local y establecimiento.

Myagrum perfoliatum (Brassicaceae) was discovered in the ranch cattle pens south of the barn at Tallgrass Prairie National Preserve in Chase County, Kansas by Dillis Owen, National Park Service employee, in June of 2000. Plants were 1 m tall and almost as wide. There were no leaves remaining on the plants when they were found. The distinctive fruits are club-shaped and 5–7 mm long. The primary associated species in the corrals at the time were *Rumex*, *Amaranthus*, and *Conium maculatum*.

There are no other mustards growing in Kansas that could be confused easily with *M. perfoliatum*.

Voucher specimen cited: **KANSAS. Chase Co.:** Tallgrass Prairie National Preserve, a few plants in the cattle pens near the barn, 10 Jun 2000, *Dillis Owen s.n.* (KSC).

Myagrum perfoliatum is native to Europe and western Asia. Exactly when it arrived in North America is uncertain, but it most likely came as a crop weed. This species is currently recorded from Texas, Oklahoma, and Ohio (USDA 2005). In the Texas counties of Dallas, Delta, Denton, Frannin, Grayson, Johnson, and Rockwall it is described as abundant and spreading (Diggs et al. 1999).

Cattle delivered to Tallgrass Prairie National Preserve are frequently shipped from Texas, so it is presumed that introduction of *M. perfoliatum* came from seed carried in the hooves, hair, or manure of livestock, or possibly on trucks when the animals were unloaded at the ranch corrals.

When *M. perfoliatum* was first found at Tallgrass Prairie National Preserve, the plants were mature and had produced seeds. Subsequent search of the corrals revealed five locations, mostly along fences or along building perimeters, where *M. perfoliatum* was growing. The species persisted, and large, seed-pro-

ducing plants were collected again the following year in areas where they were missed by mowing.

Intervening floristic surveys at Tallgrass Prairie National Preserve resulted in the discovery of no other populations on the ranch. Hand pulling, herbicide spraying, and mowing in the cattle pens have been effective in controlling this weedy annual. In 2004 and 2005 no *M. perfoliatum* was found in the corrals at Tallgrass Prairie National Preserve. Monitoring of the cattle pens for *M. perfoliatum* will continue.

Lespedeza thunbergii (Fabaceae) is native to eastern Asia and has naturalized in the eastern two-fifths of North America (Kartesz 1999, USDA 2005). In September 2005, *L. thunbergii* was found growing in sand prairie at Maxwell Wildlife Refuge in McPherson County, Kansas. The refuge is owned and operated by Kansas Department of Wildlife and Parks. Manager, Cliff Peterson, recalls that at one time a 3-row shelter belt ran east and west along the fence line, and *L. thunbergii* was planted in the north row of the shelter belt. The entire shelter belt and some of the fence has since been removed, but a population of *L. thunbergii* remains in ungrazed native prairie.

During the same period that maintenance of the shelter belt was discontinued, refuge policy regarding prescribed burning changed. Beginning in 1978, fire was no longer totally suppressed as it had been for more than 30 years, and a third-year burning regime was initiated to reduce woody shrubs. This leads to interesting questions about the persistence of *L. thunbergii* at the refuge, since rather than inhibit shrub lespedezas, including *L. thunbergii*, fire favors them by encouraging seed germination (Maryland Cooperative Extension Service 2005).

Lespedeza thunbergii plants at the refuge are 1–1.8 m tall and grow in open, sandy soil among prairie grasses and forbs. They form a thicket approximately 60 m^2 in a slight draw. Individuals are scattered a short distance from the main population. Multiple, semi-woody stems originate from the base of each plant. The rose-purple corolla is 13–15 mm long, leaflets are 2–3 times as long as wide and acute at the apex. The plants produced an abundance of seeds.

The only other *Lespedeza* that might be mistaken for *L. thunbergii* is *L. bicolor*. *Lespedeza bicolor* has been found at only one or two locations in Kansas and differs by having a shorter corolla and rounder leaflets (Isely 1990).

Voucher specimen cited: **KANSAS. McPherson Co.:** 5 mi S, 1 mi W of Roxbury, SE of tower at Maxwell Wildlife Refuge in sandy prairie, 26 Sep 2005, *Barnard 2086, C. Peterson* (KSC).

Lespedeza thunbergii is grown in the United States as an ornamental and is recommended for wildlife food and cover. The Maryland Cooperative Extension Service has published the uses, establishment, and management of several shrub lespedeza species, including *L. thunbergii* (Maryland Cooperative Extension Service 2005). The Southeast Exotic Pest Plant Council lists *L. thunbergii*

as level three on the Kentucky invasive plant list. Level three is regarded as a "lesser threat" and described as a species that principally spreads and remains in disturbed corridors, not readily invading natural areas (SE-EPPC 2005). Concern about the invasive tendencies of related species, *L. cuneata*, in Kansas has persuaded refuge management in McPherson County to consider control or eradication of *L. thunbergii*.

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